~~Claims 1-26 (Cancelled).~~

C1

37. *(First Amended)* A method for manufacturing a carbon nanotube device, the method comprising:

forming a layer of conductive material on an insulative substrate;

etching a trench in the layer of conductive material and exposing the insulative substrate at the bottom of the trench;

forming catalyst material on portions of the layer of conductive material at opposing sides of the trench; and

heating the substrate while introducing a carbon feedstock gas to the catalyst material and growing an aligned carbon nanotube extending from the catalyst material and across the trench.

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38. *(New)* A system for manufacturing a carbon nanotube device with a tip comprising a carbon nanotube, the system comprising:

means for disposing a catalyst particle on a free end of a cantilever; and

means for contacting a carbon-containing gas to the catalyst particle at elevated temperature and growing a carbon nanotube from the catalyst particle.

39. *(New)* A system for manufacturing a carbon nanotube device with a tip comprising a carbon nanotube extending from a cantilever having a catalyst particle disposed on a free end thereof, the system comprising:

a chamber adapted to contact a carbon-containing gas to the catalyst particle at elevated temperature and to grow a carbon nanotube from the catalyst particle.

40. *(New)* The system of claim 39, further comprising:

a deposition arrangement adapted to dispose a catalyst particle on a free end of a cantilever.

41. *(New)* A system for manufacturing a carbon nanotube device, the system comprising:

means for forming an island of catalyst material; and

means for contacting the catalyst island with a carbon-containing gas and forming a carbon nanotube extending from the catalyst island.

42. *(New)* A system for manufacturing a carbon nanotube device, the system comprising:

a deposition arrangement adapted to form an island of catalyst material; and

a chamber adapted to contact the catalyst island with a carbon-containing gas and form a carbon nanotube extending from the catalyst island.

43. *(New)* The system of claim 42, wherein the chamber is adapted to create conditions suitable for reacting the carbon-containing gas with the catalyst island for growing the carbon nanotube.

44. *(New)* The system of claim 42, wherein the chamber comprises:

a chemical vapor deposition (CVD) apparatus configured and arranged for growing carbon nanotubes.

45. *(New)* The system of claim 44, wherein the CVD apparatus is configured and arranged to introduce carbon feedstock gas for growing carbon nanotubes in the chamber.

46. *(New)* The system of claim 45, wherein the CVD apparatus is configured and arranged to introduce the carbon feedstock gas to a catalyst for growing carbon nanotubes in the chamber.

47. *(New)* The system of claim 42, wherein the chamber is configured and arranged to grow carbon nanotubes from a catalyst island on a substrate in the chamber.

48. *(New)* The system of claim 42, wherein the chamber is further configured and arranged to grow a carbon nanotube extending between the catalyst island and a circuit node.

49. *(New)* The system of claim 42, wherein the chamber is further configured and arranged to grow a circuit including a carbon nanotube extending between two circuit nodes and adapted for conducting electricity between the two circuit nodes.

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50. *(New)* The system of claim 42, wherein the chamber is further configured and arranged to grow a carbon nanotube extending from a cantilever tip.

51. (New) The system of claim 50, wherein the chamber is further configured and arranged for holding a wafer including a multitude of cantilever tips and to grow carbon nanotubes extending from a plurality of the multitude of cantilever tips.

52. *(New)* The system of claim 42, wherein the chamber is further configured and arranged to grow a carbon nanotube extending between two catalyst islands.

53. (New) The system of claim 42, wherein the chamber is further configured and arranged to grow a carbon nanotube from a catalyst island including an alumina-supported iron catalyst.

54. *(New)* The system of claim 42, wherein the chamber is further configured and arranged to grow a plurality of carbon nanotubes extending from catalyst islands patterned on a substrate.

55. *(New)* The system of claim 42, further comprising a gas supply configured and arranged for introducing the carbon feedstock gas to the chamber.

56. *(New)* The system of claim 55, wherein the gas supply is configured and arranged for introducing a carbon feedstock gas including Methane to the chamber to grow the carbon nanotube.

57. *(New)* The system of claim 42, wherein the chamber is configured and arranged to grow the carbon nanotube from catalyst particles lithographically patterned on a substrate.

58. *(New)* The system of claim 42, wherein the chamber is configured and arranged to grow the carbon nanotube at a temperature of less than about 1000 degrees Celsius.

59. *(New)* The system of claim 58, wherein the chamber is configured and arranged to grow the carbon nanotube at a temperature of between about 850 and 100 degrees Celsius.

60. *(New)* A system for manufacturing a carbon nanotube device extending from a catalyst island, the system comprising:

a chamber; and

a gas supply configured and arranged with the chamber for contacting a catalyst island in the chamber with a carbon-containing gas and forming a carbon nanotube extending from the catalyst island.

61. *(New)* The system of claim 60, wherein the gas supply and the chamber are adapted to contact the carbon-containing gas to the catalyst island for a period of time sufficient to form carbon nanotubes.

62. *(New)* The system of claim 60, wherein the chamber is further adapted for heating the catalyst island, prior to contacting the catalyst island with a carbon-containing gas.

63. *(New)* The system of claim 60, wherein the gas supply is configured and arranged for contacting the catalyst island with a carbon containing gas that has been reacted using a catalyst.

64. *(New)* The system of claim 60, wherein the gas supply is adapted to react the carbon containing gas with a catalyst, prior to contacting the catalyst island with the carbon-containing gas and forming a carbon nanotube.

65. *(New)* The system of claim 60, wherein the chamber is configured and arranged to heat a substrate to decompose a catalyst material to form the catalyst island.

66. *(New)* A system for manufacturing a carbon nanotube device, the system comprising:

means for forming a layer of conductive material on an insulative substrate;

means for etching a trench in the layer of conductive material and exposing the insulative

substrate at the bottom of the trench;

means for forming catalyst material on portions of the layer of conductive material at opposing sides of the trench; and

means for heating the substrate while introducing a carbon feedstock gas to the catalyst material and growing an aligned carbon nanotube extending from the catalyst material and across the trench.

67. *(New)* A system for manufacturing a carbon nanotube device, the system comprising:

a metal deposition arrangement adapted to form a layer of conductive material on an insulative substrate;

an etching arrangement adapted to etch a trench in the layer of conductive material and expose the insulative substrate at the bottom of the trench;

a catalyst deposition arrangement adapted to form catalyst material on portions of the layer of conductive material at opposing sides of the trench; and

a chamber adapted to heat the substrate while introducing a carbon feedstock gas to the catalyst material and to grow an aligned carbon nanotube extending from the catalyst material and across the trench.

68. *(New)* The system of claim 67, wherein the metal deposition arrangement and the catalyst deposition arrangement are the same deposition arrangement and wherein the catalyst includes metal.

69. *(New)* The system of claim 67, wherein the etching arrangement is adapted to etch a trench in the exposed insulative substrate.

70. *(New)* The method of claim 37, further comprising etching a trench in the exposed insulative substrate.